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PATENT

1623  
\$

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Chaudhari et al.

Serial No.: 09/628,158

Group No: 1623

Filed: 07/28/00

Examiner: J. Calve

For: AN IMPROVED PROCESS FOR THE PREPARATION OF 2-ARYL PROPIONIC ACID

Assistant Commissioner of Patents  
Washington, D.C. 20231

AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application.

STATUS

2. Applicant is

— a small entity - verified statement:

— attached.

— already filed.

X other than a small entity.

RECEIVED  
JAN 07 2002  
TECH CENTER 1600/2900

CERTIFICATE OF MAILING (37 CFR 1.8(a))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United State Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Sarah Kennedy  
(Type or print name of person mailing letter)

Date: 1/2/02

[Signature]  
(Signature of person mailing paper)

## EXTENSION OF TERM

NOTE: "Extension of Time in Patent Cases (Supplement Amendments)--If a timely and complete response has been filed after a Non-Final Office Action, an extension of time is not required to permit filing and/or entry of an additional amendment after expiration of the shortened statutory period.

If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run." Notice of December 10, 1985 (1061 O.G. 34-35).

NOTE: See 37 CFR 1.645 for extensions of time in interference proceedings and 37 CFR 1.550(c) for extensions of time in reexamination proceedings.

3. The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply

(complete (a) or (b) as applicable)

(a) X Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

Extension (months)	Fee for other than <u>small entity</u>	Fee for <u>small entity</u>
<u>   </u> one month	\$ 110.00	\$ 55.00
<u>   </u> two months	\$ 400.00	\$200.00
<u>X</u> three months	\$ 920.00	\$460.00
<u>   </u> four months	\$1,440.00	\$720.00
<u>   </u> fifth month	\$1,960.00	\$980.00

Fee \$ 920.00

If an additional extension of time is required please consider this a petition therefor.  
(check and complete the next item, if applicable)

    An extension for        months has already been secured and the fee paid therefor of  
\$        is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$

OR

(b)     Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

## FEE FOR CLAIMS

4. The fee for claims (37 CFR 1.16(b)-(d)) has been calculated as shown below:

(Col. 1)	(Col. 2)	(Col. 3)	SMALL ENTITY			OTHER THAN A SMALL ENTITY	
CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE	OR	RATE	ADDIT. FEE
TOTAL	MINUS	20	=	x 9= \$	x18=	\$	0.00
INDEP.	MINUS	3	=	x40= \$	x80=	\$	0.00
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			+135=	\$	+270=	\$	
				TOTAL ADDIT. FEE \$	OR	TOTAL ADDIT. FEE	\$ 0.00

If the entry in Col. 1 is less than entry in Col. 2, write "0" in Col. 3.  
 If the "Highest No. Previously Paid For" IN THIS SPACE is less than 20, enter "20".  
 If the "Highest No. Previously Paid For" IN THIS SPACE is less than 3, enter "3".  
 The "Highest No. Previously Paid For" (Total or Indep.) is the highest number found in the appropriate box in Col. 1 of a prior amendment or the number of claims originally filed.

WARNING: "After final rejection or action ( 1.113) amendments may be made cancelling claims or complying with any requirement of form which has been made." 37 CFR 1.116(a) (emphasis added).

(complete (c) or (d) as applicable)

- (c)   X   No additional fee for claims is required.

OR

- (d)        Total additional fee for claims required \$                     .

## FEE PAYMENT

5.   X   Attached is a check in the sum of \$ 920.00.
- Charge Account No.                      the sum of \$           .
- A duplicate of this transmittal is attached.

### FEE DEFICIENCY

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, (1065 O.G. 31-33).

6. X If any additional extension and/or fee is required, charge Account No. 19-0079

### AND/OR

X If any additional fee for claims is required, charge Account No. 19-0079

  
SIGNATURE OF ATTORNEY

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DUPLICATE  
#8

5728

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**APPLICANT:** Chaudhari et al. **GROUP:** 1623  
**SERIAL NO:** 09/628,158 **EXAMINER:** J. Calve  
**FILED:** 07/28/00  
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PROPIONIC ACID

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

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JAN 07 2002  
TECH CENTER 1600/2900

RESPONSE

This is a response to the Office Action mailed May 21, 2001.

Claims 1-19 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application Number 09/662,035. The Applicants believe the rejection should be withdrawn as the present application was filed prior to copending U.S. Patent Appln. No. 09/662,035. In addition, the phosphine ligands of the catalyst used in these two applications are different and hence, the scopes of the two applications are different.

Claims 1-19 have been rejected under 35 U.S.C. § 103 as being unpatentable over Chaudhari et al., U.S. Patent No. 6,093,847 in view of Lin et al., U.S. Patent No. 5,055,611.

The Examiner's rejection is respectfully traversed.

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Chaudhari et al. '847 describes the preparation of Ibuprofen from 2-arylalcohol using a catalyst comprising a Group VIII metal and a semilabile anionic chelating ligand, which is an organic compound containing a N donor and an O<sup>-</sup> group. The semilabile bifunctional nature of the ligand imparts good catalytic properties to the catalyst.

Whereas, in the present invention, the use of a catalyst comprising Palladium metal and phosphine ligand to convert 2-arylalkyl halide to 2-arylpropionic acid is described. Thus, the substrate and the catalyst used in these two cases are different. In addition, the considerable differences in the chemical nature of the catalysts used by Chaudhari et al. '847 and the present invention does not envisage any obvious hint or suggestion to use the bidentate palladium catalyst in the present invention to generate 2-arylpropionic acid from 2-aryl alkylhalide.

On the other hand, Lin et al. '611 is directed to the preparation of 2-arylpropionic acid from 2-aryl alkylchloride, 2-arylalcohol and 2-arylolefin. In the Lin reference, the aryl group is confined only to the phenyl group, whereas in the present invention the aryl groups are extended to groups other than phenyl, for example, naphthyl and substitute naphthyl groups. Additionally, Lin et al. '611 uses aqueous mineral acid, while the present invention describes the use of organic acid as one of the reactants. Furthermore, the phosphine ligand used in Lin et al. '611 is confined to only triaryl and trialkyl phosphines, whereas in the present invention various additional phosphine ligands have been used to achieve superior results. Lastly, the use of an halide promoter in the present invention is from an halide salt of alkali metals and this is not suggested or disclosed in the Lin et al reference and hence, the Lin et al. reference is not relevant to the present invention.

The teachings of the two cited references should not be combined to render the present invention obvious. There are a few common features between the two references, such as they

obtain a common end product. However, the reactants cannot be substituted one for the other in order to obtain the Applicants' invention. One cannot pick and choose among the components of the two references to obtain the desired product. Thus, there is no logical link between the two citations.

In view of the foregoing, the Applicants also respectfully contend that the teachings of Chaudhari et al. '847 in view of Lin et al. '611 do not establish a *prima facie* case of obviousness under the provisions of 35 U.S.C. Thus, claims 1-19 are considered to be patently distinguishable over the prior art of record.

The application is now considered to be in condition for allowance, and an early indication of same is earnestly solicited.

Respectfully submitted,



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